Warehousing Development and Regulatory Authority (WDRA)

Call for Application for grant of Certificate of Registration to Repository

DISCLAIMER

The information contained in this Call for Application and any information provided to the Applicants subsequently, both in verbal and written form by or on behalf of the Warehousing Development and Regulatory Authority (WDRA), is to assist them in the formulation of their Application.

The Call for Application does not purport to contain all the information that Applicant(s) may require. The Call for Application may not be appropriate for all persons, and it is not possible for WDRA to take into account the needs of each Applicant in terms of investment objectives, financial situation or any other information that the applicant may require to respond to this Call for Application. Each Applicant may conduct its own due diligence, investigations, analysis and check the accuracy, reliability and completeness of the information before responding to the Call for Application. Applicants may obtain independent advice if they deem necessary and appropriate so as to make an informed decision to respond to the call for application. WDRA makes no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the Call for Application and any action that the WDRA may take while granting the Certificate of Registration.

WDRA may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information provided in the Call for Application. WDRA reserves its right to accept or reject any or all of the Applications or cancel the process without giving any reasons whatsoever.

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Definitions

- "Act" means the Warehousing (Development and Regulation) Act, 2007 (37 of 2007).
- "affiliate" means —
    I. applicant's key managerial persons or any of their relatives who are key managerial persons;
    II. a company in which the applicant or any of its key managerial persons is a Member or Director; any person on whose advice, directions or instructions the applicant or any of its key managerial persons is authorised to act, except where the advice, directions or instructions are given in a professional capacity;
    III. any company which is —
        1. a holding, subsidiary or an associate company of the applicant; or
        2. a subsidiary of a holding company to which the applicant is also a subsidiary.
- "applicant" means the entity seeking registration to establish a repository on its own name or as a sponsor that will establish a repository through a separate company.
- "application" means the information submitted by an applicant, expressing an unconditional interest in getting registered as a repository, and includes the documents regarding eligibility and technical requirements specified in the guidelines and the call for applications.
- "application due date" means the last date and time for submitting the application.
- "authorised officer" means an officer employed with the Authority who is assigned, by the Authority, the responsibility of performing any functions under the guidelines, or any other rules or regulations made under the Act, or any notifications.
- "Authority" means the Warehousing Development and Regulatory Authority established under the Act.
- "Call for Application" means this document, along with addendum/corrigendum that may be issued by WDRA.
- "commencement of business" means the date on which the Authority grants permission to a repository to commence the business of providing the core services of a repository.
- "company" means any entity formed and registered under Companies Act, 1956 (1 of 1956) or Companies Act, 2013.
- "core services of a repository" means all of the following -
    I. enabling safe and accurate creation, storage, maintenance and cancellation of electronic Negotiable Warehouse Receipts;

II. enabling the transfer, pledge or removal of the pledge, e-auction of electronic Negotiable Warehouse Receipts;

III. enabling the delivery of goods in part or full, underlying the electronic Negotiable Warehouse Receipts, through the warehousemen;

IV. on-boarding the users of a repository;

V. performing the functions of a repository participant;

VI. providing appropriate access to the repository to the users of the repository

- "electronic" means any combination of text, graphics, data, audio, pictorial, or other information representation in digital form that is created, modified, maintained, archived, retrieved, or distributed by an Information Technology system

- "exchange" means a stock exchange or a commodity derivatives exchange approved by the Securities and Exchange Board of India under (j) of section 2 of the Securities Contracts (Regulation) Act, 1956;

- "external person" means a person who satisfies all of the following requirements —

    I. is independent of the Authority;

    II. is not an applicant, or a relative or an affiliate of an applicant; and

    III. is assigned, by the Authority, the responsibility of performing any functions under any rules, regulations or guidelines made under the Act, or under any notifications issued by the Authority

- "guidelines" means Guidelines on Repositories and Creation and Management of Electronic Negotiable Warehouse Receipts.

- "key managerial person", in relation to an applicant or a repository, means –

    I. the Chief Executive Officer or the Managing Director;

    II. A whole-time Director or Executive Director or equivalent;

    III. the Chief Financial Officer;

    IV. the Company Secretary; and

    V. any other official by whatever name called, who performs the functions of any of the aforesaid officials or functions of a similar nature

- "Pre-application meeting" refers to the meeting that will be held by WDRA to clarify the concerns and queries with respect to the call for application that the prospective applicants may have so as to enable them to submit their applications.

- "outsourcing" means appointing another person to perform one or more of the services of repository which would otherwise be performed by the repository in the normal course of

business. Provided however, that the services rendered by a repository participant will not be construed as outsourcing.

- "Registration" means the grant a Certificate of Registration to a successful applicant as per Clause 9 of Guidelines.
- "registration schedule" means the timelines mentioned in this call for application.
- "relative" means a relative as defined under the Companies Act, 2013.
- "repository" means a company that has received a Certificate of Registration under the guidelines.
- "repository participant" means a person appointed by the repository under the guidelines.
- "sponsor" means an entity or group of entities that declare themselves as sponsor(s) for setting up a Repository in a sole or joint manner. Where there are more than one sponsors, one among them to be the lead sponsor who will make the application for issue of Certificate of Registration.
- "strategic business unit" means the identifiable activity within a company that has operational, financial, and manpower resources and systems, segregated from the other activities of the company.
- "subsidiary" in relation to any other company (i.e. the holding company), means a company in which the holding company directly or indirectly or through another subsidiary —
  - (i) controls the composition of the Board of Directors, such control being implied in cases where the company by exercise of some power exercisable by it at its discretion can appoint or remove all or a majority of the directors; or
  - (ii) exercises or controls more than one-half of the total share capital either on its own or together with one or more of its subsidiary companies.
- "successful applicant" means the applicant that has qualified all the stages of evaluation as defined under Section 5 of this document.
- "user" means a depositor, holder, financial institution, exchange, clearing house, warehouseman, Repository Participant or any other person to whom the Repository provides core services.
- "writing" means typing, printing, lithography and other modes of representing or reproducing words in a visible form, including electronic forms.

ABBREVIATIONS

Abbreviation	Description
AoA	Articles of Association
API	Application Programming Interface
BCP	Business Continuity Plan
BPMN	Business Process Modelling Notation
CA	Chartered Accountant
CM	Clearing Member
CMC	Clearing Member Companies
CWC	Central Warehousing Corporation
DC	Data Center
DP	Depository Participant
DR	Disaster Recovery
EMD	Earnest Money Deposit
eNWR	Electronic Negotiable Warehouse Receipt
ERP	Enterprise Resource Planning
ESB	Enterprise Service Bus
FCI	Food Corporation of India
FI	Financial Institution
ICT	Information and Communication Technologies
IRDA	Insurance Regulatory and Development Authority
ISO	International Organisation for Standardisation
IST	Indian Standard Time
IT	Information Technology
KYC	Know Your Customer
KYD	Know Your Depositor
LoI	Letter of Intent
MoA	Memorandum of Association
ODBC	Open Database Connectivity
OEM	Original Equipment Manufacturer
OWASP	Open Web Applications Security Project
PFRDA	Pension Fund Regulatory and Development Authority
RBI	Reserve Bank of India
RFID	Radio Frequency Identification
RP	Repository Participant
RPO	Recovery Point Objective
RTO	Recovery Time Objective
RTSP	Real Time Streaming Protocol

Abbreviation	Description
SAN	Storage Area Network
SEBI	Security and Exchange Board of India
SI	System Integrator
SLA	Service Level Agreement
SLM	Service level agreement
SOP	Standard Operating Procedure
STQC	Standardised Testing and Quality Certification
SWC	State Warehousing Corporation
tpm-c	transactions per minute
UAT	User Acceptance Testing
UI	User Interface
UTM	Unified Threat Management
WDRA	Warehousing Development and Regulatory Authority
WSP	Warehouse Service Provider
Xml	Extensible Mark-up Language

1. Introduction

1.1. Overview of WDRA

Warehousing Development and Regulatory Authority (WDRA) is a regulatory body set up by the Government of India in October 2010 under the Warehousing (Development and Regulations) Act, 2007 to exercise the powers conferred on and to perform the functions assigned to it under the act, for the development and regulation of warehouses, negotiability of Warehouse Receipts and promote orderly growth of the warehousing business. The authority has its headquarters in New Delhi.

The mission of Warehousing Development and Regulatory Authority (WDRA) is to "*regulate and ensure implementation of the provisions of the Warehousing (Development and Regulation) Act, 2007 for the development and regulation of warehouses, Regulations of Negotiability of Warehouse Receipts and promote orderly growth of the warehousing business*"[1].

The key objectives of the WDRA are to make provisions for the development and regulation of warehouses and negotiability of warehouse receipts which will ultimately result in:

- Enabling farmers/depositors to seek loans easily from Banks
- Enhanced fiduciary trust of banks in such negotiable Warehouse Receipts
- Encouragement of scientific warehousing of goods.
- Shorter and more efficient supply chains.
- Enhanced rewards for grading and quality of deposited goods.
- Better price risk management by farmers.
- Higher returns to farmers and better services (quality) to the consumers.
- Avoidance of distress sale of agriculture produces by farmers during peak marketing season.

The WDRA, 2007 Act empowers WDRA to carry out the following activities, among others:

- *"to issue to the applicants fulfilling the requirements for warehousemen a certificate of registration in respect of warehouses, or renew, modify, withdraw, suspend or cancel such registration"*
- *"to regulate the registration and functioning of accreditation agency, renew, modify, withdraw, suspend or cancel such registration, and specify the code of conduct for officials of accreditation agencies for accreditation of the warehouses"*

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[1] http://wdra.nic.in/

- *"to specify the qualifications, code of conduct and practical training for warehousemen and staff engaged in warehousing business"*
- *"to regulate the process of pledge, creation of charges and enforcement thereof in respect of goods deposited with the warehouse"*
- *"to specify the duties and responsibilities of the warehouseman"*

With these objectives in mind, WDRA aims to promote efficiency in the conduct of warehouse business and invite various market participants to create a well-developed ecosystem. The stakeholders of WDRA in the envisaged ecosystem would include:
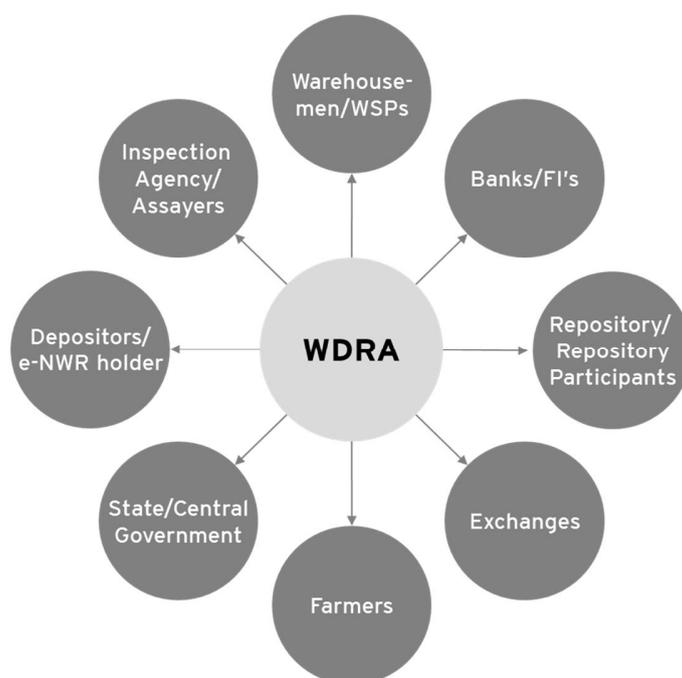
Figure 1: Stakeholders of WDRA in the current ecosystem

1.2. Warehousing Sector in India

1.2.1. Overall market size

Indian economy is an agrarian economy with over 70% of population engaged in activities related to agriculture, producing around 340 million ton[2] with an annual growth of about 3%[3]. A major part of the food grain production consists of rice (41%) and wheat (35%) of agricultural produce.

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[2] Agricultural Statistics Report 2014 by Ministry of Agriculture, Govt. of India

[3] Source: World Bank

The marketable surplus of agricultural goods is around 70% of the total production[4]. Presently, India has total agricultural warehousing capacity of around ~120 million ton[5], which is ~54% of the total marketable surplus. This ~120 million ton is distributed over about 61,000 warehouses.

At present the warehousing market is inefficient and fragmented. There are a number of inefficiencies that exist in the market. These are listed below:

1. **Information asymmetry:** Due to insufficient information about the warehouses, banks and depositors can't ascertain the quality of warehouses and the value of the warehouse receipts issued to them as well as physical presence of goods in the warehouses. This has led banks to resort to the services of Collateral Management Companies (CMC) at the time of giving loans against the goods stored in warehouses.

2. **Lack of Standardisation of Warehouse Receipts:** Currently warehouses issue their own Warehouse Receipts. As a result, the format of these Warehouse Receipts and the information contained therein vary from one warehouse to another, across the country. Therefore it becomes difficult for the market participants to ascertain the value and reliability of these Warehouse Receipts.

3. **Inadequate nationwide regulation and enforcement:** Different states have separate acts to regulate the warehouses in the respective state. State laws containing legal consequences for offences committed vary from state to state, and are applied inconsistently across the country. As a result, there is no national standardisation for warehouse regulation and enforcement. Market participants are therefore forced to rely heavily on contractual processes (that are devoid of any statutory backing) to detect any violations or to impose penalties or to adjudicate disputes.

1.3. Existing ecosystem

The current ecosystem of Warehouse Receipts management involves only a limited number of participants. These include farmers/traders, warehouses, assaying agencies, WDRA, and banks. In the current ecosystem, the depositor deposits the goods at the warehouse. Warehouses conduct the grading through grading (assaying) agencies and issue Warehouse Receipts to the depositor.

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[4]Source: Agriculture Warehousing in India- Data, Statistics and Opportunities (Source : http://indiamicrofinance.com/agriculture-warehousing-india.html)

[5]Source: Committee Report on Strengthening of NWR 2015, Department of Food & Public Distribution, Government of India.

In case the depositor requires a negotiable Warehouse Receipt, the warehouse can issue a negotiable Warehouse Receipts (NWR) that are provided by WDRA to warehousemen in physical form. Such NWR can be issued only by warehouses that are registered with WDRA and all other Warehouse Receipts are not negotiable. The ownership of NWR can be traded multiple times during its life cycle for the purpose of availing of credit or trade with other farmers/ traders.

The current ecosystem of warehouse markets is seen to be inhibited with numerous limitations. These include:

- Lack of warehousing standards across the country,
- Lack of standardisation in grading of goods,
- Fragmented market with large unorganised players,
- Skill shortages in the warehousing sector,
- Lack of IT infrastructure especially in small warehouses,
- Process inefficiencies in the life cycle of goods management in warehouses.

In order to overcome these shortcomings, WDRA has made various efforts to have a standardised warehousing facility across India. One of the steps has been to fix norms for accreditation of warehouses. These have led to increased investments, reduced logistics costs, and reduction in losses of the farm produce. Furthermore, WDRA has made efforts towards promoting Warehouse Receipts as a negotiable instrument, thereby enhancing the scope for obtaining finance against such instruments.

1.4. The need for transformation

Warehouses currently operate in an unorganized, fragmented but rapidly evolving market. There are a number of factors that are limiting the growth of the market and the following are some of the significant factors that call for the need for transformation:

- **Grading and Standardisation** - The practice of independent determination and verification of the quantity and quality of stored goods, based on a standardised grading system and the availability of property and casualty insurance are the key factors which are limiting the expansion of negotiable Warehouse Receipt as a credible instrument. A key prerequisite for the acceptability of Warehouse Receipts by the traders and banks would be guaranteed performance by the warehouses, assurance that the quantities of goods stored match with what is mentioned on the Warehouse Receipts and the quality is same or better than what is stated on the Warehouse Receipts. In the absence of such guarantees, traders will be reluctant to deal in those Warehouse Receipts issued by the warehouses and banks will be hesitant to accept Warehouse Receipts as collateral for financing agricultural inventories. The unavailability of

performance guarantees, because of the absence of reliable inspection and certification often leads to lack of faith in the quality of collateral.

· **Financing against Warehouse Receipts** - Financing against Warehouse Receipts is still not very popular in India although this mode can serve as highly credible collateral for agricultural credit. There are a number of issues faced by banks that are limiting the banks from financing against Warehouse Receipts. Some of these include method of transfer of Warehouse Receipts, making Warehouse Receipts fully negotiable, electronic maintenance of Warehouse Receipts, risk weight financing in agriculture sector, stamp duty on pledge of physical Warehouse Receipts and risk the associated with physical Warehouse Receipts, etc.

· **Lack of awareness** – Currently, there is lack of awareness in the market regarding the benefits of using negotiable Warehouse Receipts. In many cases, warehouses do not issue Negotiable Warehouse Receipts thus limiting the full potential of such instruments. This often results in inefficiencies in the overall goods chain and the sufferers are its participants viz., farmers, financiers, traders, processors, etc.

· **Lack of a credible agency to manage the life cycle of Warehouse Receipts** - The Warehouse Receipts are currently issued in physical form. There are a number of disadvantages in trading in physical Warehouse Receipts such as, delivery failures caused by signature mismatch, mutilation of Warehouse Receipts, postal delays and loss of receipts during transit and so on. Also, the absence of a credible agency to manage the entire life cycle of eNWR makes it difficult to spread the awareness and build trust about this instrument among various market participants. In the securities markets, centralized depository has eliminated much of the risks as highlighted above and offer electronic book keeping facilities making it easily accessible. Thus, to create a credible and strong ecosystem and to achieve higher efficiencies in goods market it is crucial to have a similar electronic book keeping facility for Warehouse Receipts. Therefore, Repositories (like Depositories) will provide the much needed electronic book keeping facilities for the overall growth and development of the goods market. .

1.5. Role of Repositories

In the financial markets, depositories have established their significance and credibility in promoting a vibrant and efficient capital markets through safekeeping of securities in a dematerialized form, ease of transfer, ease of portfolio monitoring and elimination of problems related to transfer and transmission of securities. In the goods market, a similar transformation is necessary and can be achieved only with the help of repositories that can help build an integrated ecosystem to facilitate the creation, storage, transfer, pledge and other activities in a secure manner.

1.5.1. The need for repositories

Introduction of repositories in the commodity markets has the potential to transform the manner in which market participants interact with each other. It is recognized that electronic maintenance of Warehouse Receipts in a dematerialized form would resolve the problem of inadequate speed of transactions, process of splitting of Warehouse Receipts, forgery, bad deliveries and loss of receipts etc.

The envisioned eNWR system will help in:

- Enabling book-entry holding of Warehouse Receipts that can help handle transfers and pledging efficiently
- Enabling multiple transfers without having to physically move goods from one warehouse to another
- Facilitating standardization of farm produce, grading, scientific warehousing, packing and efficient logistics management
- Help financial institutions to take active part in lending money against goods that are represented by eNWRs
- Enabling consumers (industries, processors, wholesalers, retailers etc.) to procure graded produce at competitive prices
- Promoting an efficient clearing, settlement and delivery system
- Enabling the overall market growth similar to securities market

The proposed eNWRs will be issued by registered Warehouses against the goods deposited by the farmers/traders and will be maintained in an electronic book-entry form by a Repository. This ensures a mechanism where the creation, storage, transfer, pledge, etc. of eNWRs will be carried out in a reliable and secure manner. Involvement of Repositories in the life-cycle of eNWR is expected to enhance the credibility of this instrument and it will become easy for all the stakeholders to view and track the usage of eNWR.

1.5.2. Key expectations from a repository

For the development of such a system, the indicative functions of a Repository could be as follows:

- **Management of eNWR information** – Repository (ies) will be responsible for management of the life cycle of eNWRs. Repository (ies) will be required to maintain the status of active

eNWRs as well as expired eNWRs, as required by the guidelines of WDRA. This will require a coordinated information exchange between different entities such as depositors, banks, warehouses, exchanges, and intermediaries (such as Repository Participants) etc.

- **Record Keeping and Reporting** – The key function of a Repository will be to maintain electronic records of Warehouse Receipts and transactions in eNWRs. The records maintained by a Repository will be considered as final and single source of information, with respect to any eNWR related transaction. The Repository (ies) will help the Warehouses to reconcile the information related to eNWRs as per the requirements and will also be required to report to WDRA on a regular basis.

- **Trading of eNWR** – Trading the underlying goods through a recognised exchange will result in an efficient price discovery of the respective commodity. Warehouse Receipt in an electronic form through Repositories can allow trading in such instruments to take place without the need to exchange physical goods, thereby resulting in an efficient price discovery of the underlying of the eNWR. Price discovery in goods market could help the farmers take correct decisions on their future cropping pattern. India is traditionally an agricultural economy and fluctuation in prices during the harvesting period has always been a major concern for the farming community. Futures trading can prove as a viable option for providing a greater degree of assurance on the price front, so that the farmers can get a better price on their goods.

- **Market enablers and Credibility to eNWR** – The availability of Warehouse Receipts in an electronic form could offer multiple advantages such as convenient way to hold these instruments, immediate transfers, ease of transmission, elimination of risks associated with physical receipts such as bad delivery, fake receipts, delays, thefts, etc. All these factors favourably place the Repository in enhancing the credibility of the instrument and also lead to market enablement and expansion.

INSTRUCTIONS TO APPLICANTS

1.6. Purpose of the Document

1.6.1. WDRA has floated this "Call for Application" under Clause 5 of the Guidelines for the purpose of granting a Certificate of Registration to a Repository for managing the life cycle of eNWRs.

1.6.2. The purpose of this Call for Application is to evaluate the Applicants and based on such evaluation, grant a Certificate of Registration to the successful Applicant(s), who then would undertake to build and operate the Repository and help create awareness among the users by highlighting the benefits of using the Repository for eNWRs.

1.6.3. This document seeks to provide information to make the prospective applicants understand the broad requirements of the project and submit their applications. The detailed scope of services is provided in chapters 3 & 4 of this document.

1.6.4. The Certificate of Registration granted by WDRA to a Repository shall be subject to compliance with the Act, Rules, Regulations and Guidelines made thereunder as well as any other terms and conditions that the Authority may specify.

1.6.5. The details of the application process are set out in the following paragraphs.

1.7. Registration process

The Registration process shall consist of two stages, as listed below:

a) Stage 1: Evaluation of eligibility criteria mentioned under Section 5.2.

b) Stage 2: Technical Evaluation as mentioned under section 5.5.

1.8. Registration Schedule

1.8.1. Time is of essence and WDRA expects the applicant to strictly adhere to the timelines as mentioned below:

Sr. No.	Event Description	Timelines
1.	Date of publication of "Call for Application"	25 October 2016
2.	Date of pre application meeting	08 November 2016
3.	WDRA's response to the queries and publication of corrigendum/addendum, if any	15 November 2016
4.	Application submission due date	29 November 2016

Sr. No.	Event Description	Timelines
5.	Date of opening of Applications	29 November 2016
6.	Intimation to eligible applicants for Technical Evaluation	05 December 2016
7.	Business and technical presentation by eligible applicants before the Technical Evaluation Committee	15 December 2016
8.	Declaration of successful applicants and issuance of Letter of Intent (LoI)	23 December 2016
9.	Milestones	
1.	Tasks: · Company formation (Public Limited Company) · Finalisation of office address · Team finalisation · Contracts with third party vendors (SI, OEM, etc.)	16 January 2017
2.	Tasks: · Hardware Procurement (in case cloud solutions are not being used) · Finalisation of RP Ecosystem · Finalisation of Warehouse Ecosystem · Submission of draft bye-laws as per clause 13 and draft agreements as per clause 15 of the guidelines to WDRA	03 March 2017
3.	Tasks: · Submission of Internal Controls and Operations Manual to WDRA · UAT Completion · Submission of net worth certificate and shareholding pattern as on 31 March 2017 to WDRA	5 May 2017
10.	· Third Party Certification for the proposed solution · Readiness Review including set up of RPs, Warehousemen · Site visit of the Repository/RPs	15 Jun 2017
11.	· Submission of performance guarantee	30 Jun 2017

Sr. No.	Event Description	Timelines
	· Grant of Certificate of Registration · Readiness for commencement of business	

1.9. E-Tendering Notes: Accessing/Purchasing the Call for Application

1.9.1. The complete Call for Application can be viewed / downloaded from e-Procurement portal i.e. https://www.tenderwizard.com/WDRA.

1.9.2. Interested applicants are required to register their request for participation in the e-tender on Tender wizard portal by clicking on request icon well in advance before the date given in Section 1.8. The registration can be done up to one day in advance of submission of application, i.e., till 28.11.2016.

1.9.3. Applicant has to pay an application fee of Rs 5,000 (excluding Service Tax) and create a login before downloading the Call for Application. The registration shall be valid for a period of 1 year.

1.9.4. A Vendors' Manual containing detailed guidelines along with screenshots for e-Procurement system is also available on e-Procurement portal of WDRA under Click to view latest Circulars/Formats/Manuals/Vendor Manual link. The manual is also uploaded along with this document.

1.9.5. Interested applicants are advised to complete the online registration, requisition and submission processes well in advance before the time deadlines so as to avoid the last minute inconveniences.

1.9.6. It is mandatory for all the applicants to have class-III Digital Signature Certificate from any of the licensed certifying agency (Applicants can see the list of licensed certifying agencies from the link www.cca.gov.in) to participate in e-Procurement of WDRA.

1.9.7. Application documents will be available online on website https://www.tenderwizard.com/WDRA from the date given in Section 1.8, which can be downloaded till the last date of submission of application.

1.9.8. Applicant shall submit a non-refundable fee of Rs. 2,000/- (Excluding Service Tax) towards e-bid processing fee at the time of request for participation in the e-tender through Debit/Credit Card using the e- payment gateway on Tender wizard portal.

1.9.9. Validity of applicant registration on the e-Procurement portal of WDRA:

a) It shall be the sole responsibility of the applicant(s) to keep the Registration valid up to the original/extended date of submission of application.

b) Applications can be submitted only during the validity of their registration.

1.9.10. WDRA may issue addendum(s)/corrigendum(s) to the application documents. In such case, the addendum(s)/corrigendum(s) shall be issued and placed on website https://www.tenderwizard.com/WDRA at any time before the closing time of submission. The applicants who have downloaded the Call of Application from other sources must visit this website and ensure that such addendum(s)/corrigendum(s) (if any) is also downloaded by them. This shall be the responsibility of the prospective registered applicants to check the website for any such corrigendum/addendum till the time of closing of Call for Application and ensure that the applications submitted by them is in accordance with all the corrigendum/ addendums.

1.9.11. The applications shall be submitted online on or before the date given in Section 1.8 in the prescribed format given on the e-tendering portal. No other mode of submission is acceptable. Detailed credentials as per the requirement of eligibility criteria and all tender papers are to be submitted in Technical Proposal.

1.9.12. Applicants cannot submit applications after the date given in Section 1.8, Indian Standard Time. The time being displayed on e-procurement portal of WDRA shall be final and binding on the applicants. After submission, no modification will be allowed under any circumstances.

1.10. Fees and Deposits

1.10.1. Fees

a) Applicant shall submit a non-refundable fee of Rs. 1,00,000/- (One Lakh Only) by way of a Demand Draft issued by a scheduled commercial bank, payable at New Delhi, in favour of "**Warehousing Development and Regulatory Authority**".

b) The DD should be submitted to Director (A&F), WDRA at "Warehousing Bhawan", 4/1, 5th Floor, Siri Institutional Area, August Kranti Marg, Hauz Khas, New Delhi – 110016 on or before submitting the Application online and a scanned copy of DD must be attached to the online application.

1.10.2. Earnest Money Deposit

a) The Application must be accompanied by an EMD of Rs. 50,00,000 (Rupees Fifty Lakhs Only) in accordance with Clause 5(7) of the Guidelines.

b) The EMD shall be by way of a Bank Guarantee (BG) or a Demand Draft issued by a scheduled commercial bank in favour of "**Warehousing Development and Regulatory Authority**" payable at New Delhi, as per details set out in Form O of Annexure II.

c) Applicant must submit the DD or BG to Director (A&F), WDRA at "Warehousing Bhawan", 4/1, 5thFloor, Siri Institutional Area, August Kranti Marg, Hauz Khas, New Delhi – 110016 on or before submitting the Application online, and a scanned copy of DD or BG must be attached to the online application.

d) EMD shall be valid for a period of nine months and if so required, the applicant would get the validity of the EMD extended as advised by WDRA.

e) If an Applicant does not receive a LoI, the EMD will be returned within thirty days.

f) The EMD of successful applicants will be returned/refunded to the applicants upon Grant of Certificate of Registration.

g) The EMD may be forfeited in the following cases:

   i. If the Applicant submits incorrect information and documents.

   ii. If the Applicant withdraws its application after the application due date.

   iii. If the Applicant tries to influence the evaluation process.

   iv. If the Applicant withdraws its application before the grant of Certificate of Registration.

1.10.3. Costs associated with participation

The Applicant submitting its application shall be solely responsible and shall bear all the costs associated with the preparation and participation in the registration process. WDRA shall not be responsible or in any way liable for any costs, regardless of the outcome of the application process.

1.11. Right to Accept or Reject Applications

1.11.1. Notwithstanding anything contained in this Call for Application, WDRA reserves the right to accept or reject any of the Applications or to cancel the entire process, at any time without any liability or any obligation for such rejection or cancellation, without assigning any reasons whatsoever. In such a case, the EMD of the applicants will be returned within a period of one month from such date.

1.11.2. WDRA reserves the right to reject the Application if the applicant fails to fulfil the eligibility criteria under Clause 4 of the Guidelines.

1.12. Contents of Call for Application

The Call for Application would include what is stated in this document and any Addendum/Corrigendum that may be issued regarding:

    a. Information for Preparation and Submission of Application.

    b. Project information and Scope for Repository (ies) Service Providers.

1.13. Amendment to Call for Application

1.13.1. At any time prior to the Application due date, WDRA may modify the Call for Application by the issuance of an Addendum/Corrigendum.

1.13.2. Any Addendum/Corrigendum thus issued shall be uploaded on the e-Tendering portal.

1.14. Number of Applications

1.14.1. Each applicant shall submit only one Application.

1.15. Completeness of Response

1.15.1. Applicant(s) are advised to study the Call for Application carefully. Submission of application shall be deemed to have been done after careful study and examination of the Call for Application with full understanding of its implications.

1.15.2. The response to this Call for Application should be full and complete and correct in all respects. Failure to furnish all information as required by the Call for Application or submission of an Application not substantially responsive to the Call for Application in every respect will be at the Applicant(s) risk and could result in rejection.

1.16. Language

1.16.1. The Application and all related correspondence and documents should be written in the English language. Supporting documents and printed literature furnished by the applicant may be in any other language provided they are accompanied by appropriate translations in the English language. Supporting materials, which are not translated into English, shall not be considered. For the purpose of interpretation and evaluation of the Application, the English language translation shall prevail.

1.17. Format and Signing of Application

1.17.1. The applicant must provide all the information as per the Call for Application.

1.17.2. The applicant shall submit online only one application along with one set of required documents in accordance with the instructions defined in e- Tendering portal.

1.17.3. In case the applicant needs to upload any written application or document with the main application, such document shall be typed and digitally signed by Authorised Representative of the applicant.

1.17.4. The entire application along with all Annexures shall be serially numbered on each page and accordingly referenced wherever indicated in the application.

1.18. Application Due Date

1.18.1. Application should be submitted **on or before 1400 hours IST of 29 November, 2016.** on the e-tendering portal. Application submitted by any other mode will not be accepted.

1.19. Pre-Application Meeting

1.19.1. To clarify and discuss issues with respect to the Call for Application, WDRA shall hold a Pre-Application meeting of the applicants.

1.19.2. Prior to the Pre-Application meeting, Applicant(s) are required to submit a list of queries, if any, related to the Call for Application. Applicant(s) must formulate their queries and forward the same to WDRA one day prior to Pre-Application meeting. WDRA may, in its sole discretion or based on inputs received from the Applicant(s), amend the Call for Application. The Pre-Application queries should be submitted in the format as given below:

S. No.	Call for Application Section No.	Call for Application Page No.	Description as in the Call for Application	Query/Clarification Sought	Suggestion / Remarks, if any

1.19.3. WDRA will not entertain any deviations to the Call for Application at the time of submission of the Application or thereafter. The Application would have to be unconditional and unqualified. Any conditional Application shall be regarded as non-responsive and would be liable for rejection.

1.19.4. The Applicant's representatives shall bring a Letter of Authority to attend the Pre-Application meeting.

1.19.5. All correspondence / enquiries should be submitted in writing to the following:

ATTN. OF:	Director (A&F), Warehousing Development and Regulatory Authority
ADDRESS:	Warehousing Bhawan, 4/1, Siri Institutional Area, August Kranti Marg, Hauz Khas, New Delhi-110016
E-MAIL	dirwdra.fpd@nic.in

1.19.6. No interpretation, revision, or other communication from WDRA is valid unless it is issued in writing by its authorized officer.

1.20. Rejection of application

1.20.1. The Application may be rejected as per the clause 10 of the guidelines.

1.21. Modifications/ Substitution/ Withdrawal of Application

1.21.1. The applicant may modify or withdraw application before the application submission, provided the applicant detaches the old documents submitted in the electronic form from the Tenderwizard (e-tendering portal) and uploads the modified or substituted documents before the application due date and time.

1.21.2. The applicant will not be permitted to withdraw its application or make any alteration/modification/substitution of the application once the application is submitted on e-tendering portal.

1.21.3. The applicants are advised to submit their applications well before the Application due date. WDRA shall not be responsible for any delay in submission of e-application for any reason whatsoever.

1.21.4. The eligibility documents and Technical Proposal shall be digitally signed by the Authorised Representative of the applicant and submitted through e-tendering portal only.

1.22. Opening of Application(s)

1.22.1. WDRA would endeavour to open the applications immediately after the application due date but in any case within 15 days of the Application Due Date for the purpose of evaluation.

1.23. Confidentiality

1.23.1. Information relating to evaluation of applications and recommendations concerning grant of Certificate of Registration shall be disclosed only to the Applicant or to any authorised representative of the Applicant.

1.23.2. WDRA including its authorised officers will not divulge any information related to financials, background etc. unless it is ordered to do so by any authority pursuant to any law or order of a competent court or tribunal, as the case may be.

1.24. Clarifications

1.24.1. To facilitate evaluation of application, WDRA may, at its sole discretion, seek clarifications in writing from any of the Applicants regarding its Application.

1.25. Consultant(s) or Advisor(s)

1.25.1. To assist WDRA in the evaluation of applications, WDRA may utilise the services of consultants or advisors as it may deem necessary.

1.25.2. The consultants or advisors appointed by WDRA for the evaluation of applications will be bound by requisite confidentiality terms as per section 2.18 of this Call for Application.

1.26. Application Evaluation

1.26.1. The application would be evaluated as per the evaluation criteria set out in Section 5 of the Call for Application.

1.26.2. The applicant moves to stage 2 only if it successfully meets the eligibility criteria mentioned in stage 1. Only those Applicant(s) that reach stage 2 would be required to provide Business and Technical Presentation of the proposed systems and solutions.

1.26.3. Upon completion of both stages of evaluation, WDRA will intimate the shortlisted Applicants by issuing a Letter of Intent ('LoI')

1.27. Performance Guarantee

1.27.1. The Applicant, before grant of Certificate of Registration shall furnish a Performance Guarantee by way of an irrevocable Bank Guarantee, of INR 5,00,00,000 (Rupees Five Crore Only) issued by a scheduled commercial bank in favour of "**Warehousing Development and Regulatory Authority**".

1.27.2. This Performance Guarantee shall be a revolving on-demand bank guarantee, renewed as often as required for maintaining its validity throughout the operation in order to ensure satisfactory compliance with the provisions of the SLA.

1.27.3. The Performance Guarantee shall be submitted in the format as provided in Form O of Annexure II.

1.28. Acceptance of Letter of Intent

1.28.1. Within one week from the date of issue of the LoI, the shortlisted Applicant shall accept the LoI and the terms and conditions thereof, and return the same to WDRA.

1.29. **Grant of Certificate of Registration**

1.29.1. The Certificate of Registration will be granted as per clause 9 of guidelines.

1.30. **Insurance by the Repository**

1.30.1. Repository shall take adequate insurance cover as per clause 30 of the guidelines.

2. SCOPE OF SERVICES

- WDRA intends the issuance of Negotiable Warehouse Receipts in an electronic form (eNWR), through Repositories, so as to provide a number of benefits to customers.

- To issue and deal with eNWRs, WDRA has envisaged granting a Certificate of Registration to one or more repositories which will provide services related to eNWRs

- Repositories will function under WDRA's regulatory supervision.

- To issue a Certificate of Registration, WDRA wishes to invite applications from eligible entities.

- The Scope of Services is defined as per Chapters 3 and 4 of this document and the applicant should carefully go through the scope before submitting the completed application.

- The Applicant shall provide all the functionalities, features, services, and service levels listed as a part of the scope. Any additional service or functionality proposed to be provided by the Applicant shall be indicated appropriately in its Technical Application.

- As a part of its Technical Application, the applicants shall also provide a detailed plan in order to initiate the Repository operations in the event the Applicant is selected as the Repository. The Applicant shall also highlight the envisaged changes to the system components, tools and infrastructure, measures to mitigate the associated risks and the associated transition methodology, along with a timeline based plan for the implementation.

- Applicant should follow all security guidelines, advisories and vulnerability notes issued by CERT-IN and IT Act, 2008 from time-to-time.

- For the detailed rights, obligations, responsibilities and other requirements of the Repository, Repository Participants, Warehouseman, creation, management of electronic Negotiable Warehouse Receipts and inter-repository requirements (if any), refer clause 11 to 32 of the guidelines.

2.1. Salient Features of eNWR

- An eNWR will be available only in electronic form.
- The single source of information for the eNWR will be the Repository.
- Confidentiality, Integrity & Availability of the eNWR information will be provided by the Repository.
- An eNWR has a time validity, after which it expires.
- An eNWR can be auctioned under certain conditions such as loan not repaid, on expiry delivery not taken or on damage or spoilage of the commodity stored in the warehouse.

· eNWRs can be traded on exchanges (as per the decision of the exchanges) or transferred off-market between two clients

2.2. Technical Specifications of eNWR

2.2.1. The following table indicates the fields that need to be maintained by a Repository for eNWRs

Attribute name	Type	Data Type	Length	Description
Warehouse Receipt No	Mandatory	Alphanumeric	18	Unique Warehouse Receipt Number – this is a combination of Warehouse ID, Repository ID, Running Sequence Number and Check Digit using Luhn algorithm[6]. (Warehouse ID (7) + Repository ID (1) + Running Sequence Number (9) + Check Digit(1))
Receipt Date	Mandatory	Date	14	Date & time of warehouse receipt
Negotiable Receipt	Mandatory	Character	1	Indicates whether negotiable warehouse receipt ('Y') or non-negotiable warehouse receipt ('N')
Status	Mandatory	Character	1	Indicates current status of the receipt ('I' – issued, 'T' – transferred, 'P' – pledged, 'D' – de-pledged, 'N' – Invocation, 'F' – Frozen, 'R' - Provisional)
Warehouse Registration No	Mandatory	Alphanumeric	7	Unique identification for warehouse provided by WDRA on registration
Warehouse Registration Validity	Mandatory	Date	8	Date up to which warehouse registration is valid
Name of the Warehouse	Mandatory	Alphanumeric	150	Warehouse name
Warehouse Address	Mandatory	Alphanumeric	300	Warehouse Postal Address
Warehouse Location	Mandatory	Number	6	Census 2011 code for warehouse location
WSP ID	Optional	Number	7	Unique identification for warehouse service provider provided by WDRA on registration
WSP Name	Optional	Alphanumeric	150	Warehouse Service Provider name

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[6] http://en.wikipedia.org/Luhn_algorithm

Attribute name	Type	Data Type	Length	Description
WSP Address	Optional	Alphanumeric	300	Warehouse Service Provider Postal Address
Depositor Account No	Mandatory	Alphanumeric	Variable	First digit will be Repository ID and last Digit will be check digit. The structure between Repository ID and Check Digit will be decided by repository.
Depositor Name	Mandatory	Alphanumeric	100	Name of the person by whom or on whose behalf the goods are deposited
Depositor Address	Mandatory	Alphanumeric	300	Postal Address of the person by whom or on whose behalf the goods are deposited
Goods Code	Mandatory	Alphanumeric	6	Unique code for Commodity will be based on the Commodity Codification Standards to be finalized by WDRA
Unit of Measure of Quantity	Mandatory	Alphanumeric	10	Unit of measure for goods (e.g. MTs, quintals, etc.)
Quantity	Mandatory	Number	10.4	Quantity of goods as specified by the Unit of Measure (e.g. 100 for Quantity and MT for Unit of Measure means 100 MT of the goods)
Number of Packages or Bags	Mandatory	Number	5	Number of packages or bags of the goods deposited at the warehouse
Assaying Type	Mandatory	Character	1	Assaying Type ('S' – self-verified, 'T' - 3rd Party verified)
Assaying Date	Mandatory	Date	8	Date of Assaying of goods
Goods Quality or Grade	Mandatory	Alphanumeric	3	Unique code for goods quality, this is a provisional recommendation, feedback will be taken from exchanges and finalized by WDRA
Moisture at Deposit	Optional	Number	3.1	Moisture content expressed as percentage
Moisture at Lifting	Optional	Number	3.1	Moisture content expressed as percentage
Estimated Value at deposit	Optional	Number	15.4	Estimated value of goods at the time of deposit
Market Value	Mandatory	Number	15.4	Market value of Goods at Deposit
Lot Number	Mandatory	Alphanumeric	20	Unique lot number for the goods (will include the godown, stack no)
Private Marks	Optional	Alphanumeric	100	Private marks of the depositor on the packages

Attribute name	Type	Data Type	Length	Description
Storage Charges	Mandatory	Number	15.4	Storage Charges in rupees per bag/ package of ---Kg per month
Handling Charges	Mandatory	Number	15.4	Rate of Handling Charges in rupees per bag/ package of ---Kg
Other Charges	Mandatory	Number	15.4	Any other liability for which the warehouseman claims his lien
Advance Amt Paid	Optional	Number	15.4	Advance amount paid to Warehouseman
Charge Remaining	Mandatory	Number	15.4	Charges Remaining to be paid
Insurance Company Name	Mandatory	Alphanumeric	100	Name of Insurance Company indemnifying for Fire/ Floods/ Theft/ Burglary/ Misappropriation/ Riots/ Strikes/ Terrorism
Insurance Policy Name	Mandatory	Alphanumeric	100	Insurance Policy Name
Insurance Policy No	Mandatory	Alphanumeric	25	Insurance Policy Number
Insurance Coverage Amount	Mandatory	Number	15.4	Insurance coverage amount
Insurance Validity From	Mandatory	Date	8	Insurance Validity Start Date
Insurance Validity To	Mandatory	Date	8	Insurance Validity End Date
Shelf Life of Goods	Mandatory	Number	3	Validity of the receipt in days (based on the shelf life of the goods)
Storage Date From	Mandatory	Date	8	Storage Start Date
Storage Date To	Mandatory	Date	8	Storage End Date
Automated Identification & Tracking (1 or more records)				
Auto ID Type	Optional	Alphanumeric	10	Automated identification type, includes 'RFID', 'Barcode', 'QR code', etc.
Auto ID Code	Optional	Alphanumeric	25	Unique automated identification code based on the identification type defined above; can be a UPC number on the RFID tag or barcode/QR code stickers.
Transfer Details (1 or more records)				
Transferee Name	Optional	Alphanumeric	100	Name of transferee

Attribute name	Type	Data Type	Length	Description
Transferee Account No	Optional	Alphanumeric	Variable	First digit will Repository ID and last Digit will check digit. The structure between Repository ID and Check Digit will be decided by repository.
Transfer Date	Optional	Date	14	Date & time of transfer
Pledge Details (1 or more records)				
Pledgee Name	Optional	Alphanumeric	100	Name of pledgee
Pledgee Identifier	Optional	Alphanumeric	Variable	Repository ID and last Digit will check digit. The structure between Repository ID and Check Digit will be decided by repository.
Date of Pledge	Optional	Date	8	Date of pledge invocation by the pledgee
Value of Pledge	Optional	Number	15.4	Value of pledge
Date of de-pledge	Optional	Date	8	Date of release of pledge
Quantity pledged	Optional	Number	10.4	Quantity to be pledged. Field is mandatory for Pledge Creation, Pledge removal and Pledge invocation process.
Delivery details (1 or more records)				
Authorization No for Delivery	Optional	Alphanumeric	10	Unique authorization no for delivery to someone other than the owner (will include a combination of characters & random number)
Instructions for Delivery	Optional	Alphanumeric	100	Instructions for delivery
Quantity	Optional	Number	10.4	Quantity of goods for which delivery is taken
Unit of Measure	Optional	Alphanumeric	10	Unit of measure for the quantity specified above
Number of Bags or Packages	Optional	Number	5	Number of bags or packages for which delivery is taken

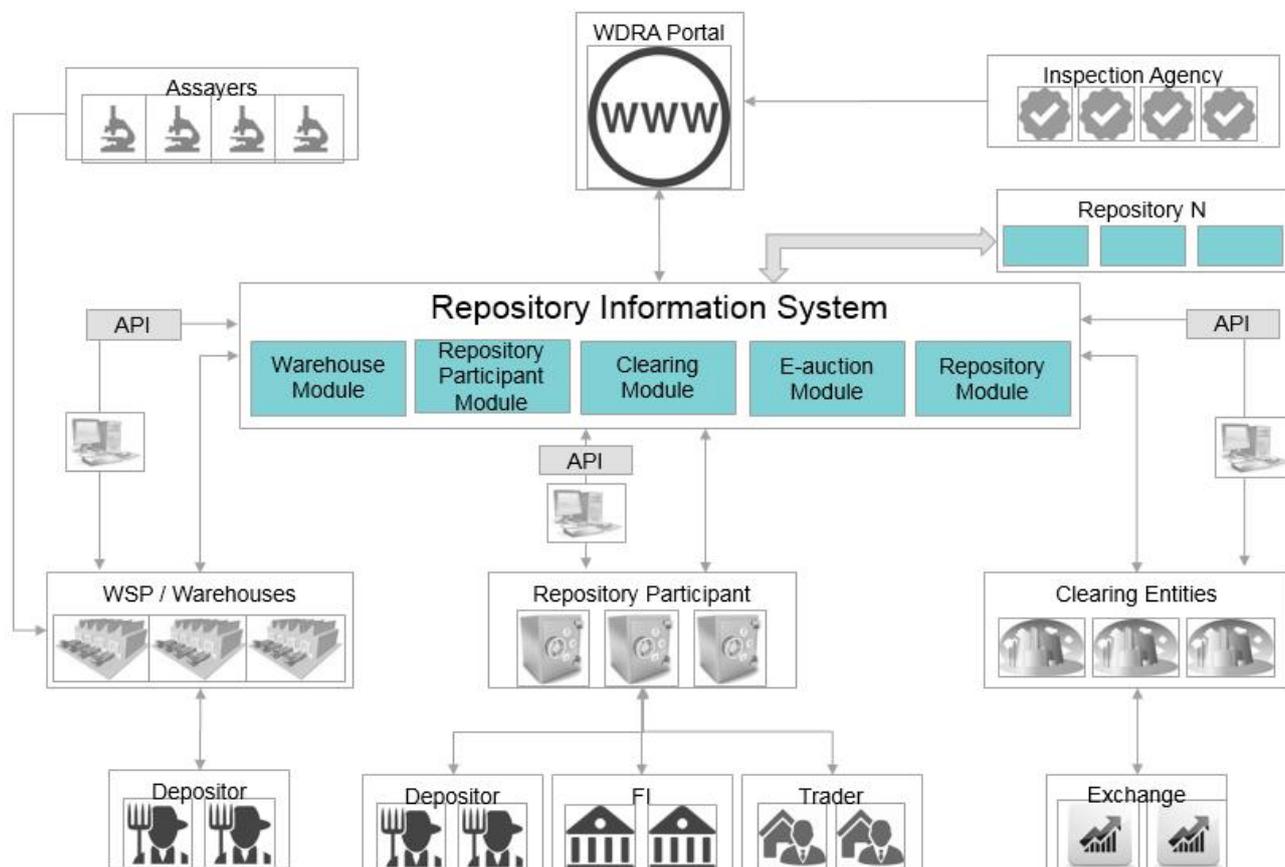## 2.3. Indicative Functional Architecture of the Repository Ecosystem

Figure 2: Indicative Functional Architecture of Repository Ecosystem

The Repository Functional Architecture will contain various participants who will have direct or indirect interaction with the repository. In the repository system the Repository Module will maintain the details of all transactions in the repository like account opening, deposit and retrieval of goods, account transfers, pledge related transactions etc. In, addition there will three separate modules to manage the warehouse operations like deposit withdrawal, Repository Participant operations like - account management, transfers and pledges and clearing module for settlement of eNWR traded in stock exchanges. The role and interaction of these modules are listed as below:

- **Repository System** - The repository system or repository module is the central system that connects various participants like warehouses/WSPs, Repository Participants and clearing services of exchanges. Through the repository module, different kinds of services are provided to the users of the repository. The primary responsibility of the repository is to maintain clients' demographic information and up to date record of eNWR balances of all clients as well as

facilitate various transactions viz., transfer, pledge, deposit, withdrawal etc. Apart from this, it also facilitates freezing and unfreezing of accounts or balances of clients on client's request or that of statutory authorities. It is also expected from the repository that it shall have the capabilities to share transaction details viz., number of eNWRS / WRs issued, transaction details etc., to WDRA and other regulatory authorities. In addition to that, the repository system should have the capabilities to monitor and provide necessary help in the investigations. Repository will also have online connectivity with other repositories directly or through a switch to facilitate seamless transactions across client maintaining accounts with different repositories.

Repositories are central source of all information dispersed across respective modules of warehouses, Repository participants and clearing and it will have centralised booking facility to ensure that every transactions is first effected in central system and the reflected in the respective warehouse or Repository Participant or Clearing module as applicable. To ensure data integrity Repositories shall implement system enforced reconciliation so that client level balances and transactions are reconciled between every repository participant module and central repository module at least once in a day

- **Warehouse Module** – This module is expected to enable the warehouses to enter information related to eNWR and WR issued by the warehouse against the deposit of goods by the farmers/traders. The warehouse module will contain the data regarding deposit / withdrawal of goods by depositors/holders and the warehouses will be responsible for updating this information.

  As a part of the repository central system, the repository shall provide an online version of this module that can be accessed by the warehouses who may not want to invest in separate IT system for their operations. This module will be tightly coupled with the Repository Module to ensure that the central system and warehouse module are updated in sync.

  The warehouses if it wishes, can develop its own module as per the minimum specification provided by the repository which will enable it to interface with the repository on a real-time basis in accordance with standard published APIs to ensure that the central system and warehouse module are updated and in sync.

- **Repository Participant Module** – This module will serve the purpose of managing accounts of the entities who hold and transact in eNWRs. As a part of the repository central system, the

repository shall provide an online version of this module that can be accessed by the entities providing the services or repository participant who may not want to invest in separate IT system for their operations. This module will be tightly coupled with the Repository Module to ensure that the central system and repository participant module are updated in sync.

The repository participants will also be allowed to develop its own module as per the minimum specification provided by the repository which will enable it to interface with the repository on real-time basis in accordance with standard published APIs to ensure that the central system and repository participant module are updated and in sync.

- **Clearing Module** – The clearing module will be responsible for carrying out the clearing and settlement of the trades executed on the exchange where the eNWRs will be traded. This module will enable the entity that is providing clearing and settlement serices to interface with repository to the extent required for clearance and settlement.

- **e-Auction Module** – This module will facilitate transactions for carrying out limited purpose auction in case of default of bank pledged goods. The module will connect the bidders and banks to enable auctions through a centralized platform.

2.4. Information Exchange by the Repository

2.4.1. With Warehousing Development and Regulatory Authority:

Repository will provide regulatory disclosure to WDRA that includes the following:

- Financial Statement such as Balance Sheet, Income Statement, etc.
- Details of change in ownership, net worth, key managerial personnel
- Details of litigation, civil or criminal cases pending against the registered warehouseman
- Number & transaction details of eNWRs & WRs issued and held/withdrawn from warehouses
- Demographic information of account holders such as address, accounts created, closed, etc.
- Details of Repository Participants, number, names, location etc.,
- Total number of accounts
- Total number of pledges and value of goods pledged
- Total number of e-auction transactions and value
- Total value of underlying goods held in eNWR form, warehouse wise
- Total quantum and value of expired commodity (pending to be extinguished)
- eNWRS frozen on the order of court and other authorities

2.4.2. With Warehouses/WSP:

Warehouses/WSPs provide the following information to the repository:

- Warehouse identification
- Depositor account details
- Commodity details such as code, grade, quantity, shelf-life, estimated value, assayer for the commodity, etc.
- Deposit duration or validity
- Commodity location in the warehouse including the lot number and identification for automated tracking using RFID or bar codes

2.4.3. With Repository Participants:

Repository Participants provide beneficiary account details to the repository and also issues request for eNWR transactions such as amendment, transfer, pledging, de-pledging, etc. Details of data attributes exchanged are provided in the Functional Requirements Specifications.

2.4.4. With Account Holders:

The Repository may share status update and account update directly to the account holders

2.4.5. With Financial Institutions:

Financial Institutions which have provided loan by marking a lien on eNWR will be required to have a repository account and they will need to exchange information through RP

2.4.6. With Assayers:

- Assayers exchange information with Warehouse/WSPs
- Assayers don't exchange any information with the repository directly.

2.4.7. With Accreditation Agencies:

- Accreditation agencies exchange information with WDRA
- Accreditation agencies don't exchange any information with the repository directly

2.4.8. With Inspection & Audit agencies:

- Inspection & Audit agencies exchange information with WDRA
- Inspection & Audit agencies seek information from the repository directly or through WDRA, as the case may be

2.4.9. With Exchanges:

Exchanges provide details of eNWR clearing and settlement to the repository.

2.5. Indicative Processes

2.5.1. For a complete list of processes please refer to Annexure I – Annexure to Scope of Services.

2.6. Indicative Solution Architecture of the Repository Ecosystem

2.6.1. The repository system will be a mission critical system with high transaction throughput, performance and availability requirements. The individual solution components need to be enterprise-class to handle these requirements. The solution architecture also needs to handle failover requirements separately at DC & DR through redundancy of hardware and configuration of multi-instance clusters with automatic failover.

2.6.2. Indicative Solution Architecture Diagram

An indicative solution architecture diagram for the data centre (DC), which shows the core infrastructure & application components, is shown below. The solution architecture for DR is expected to be an exact replica of DC
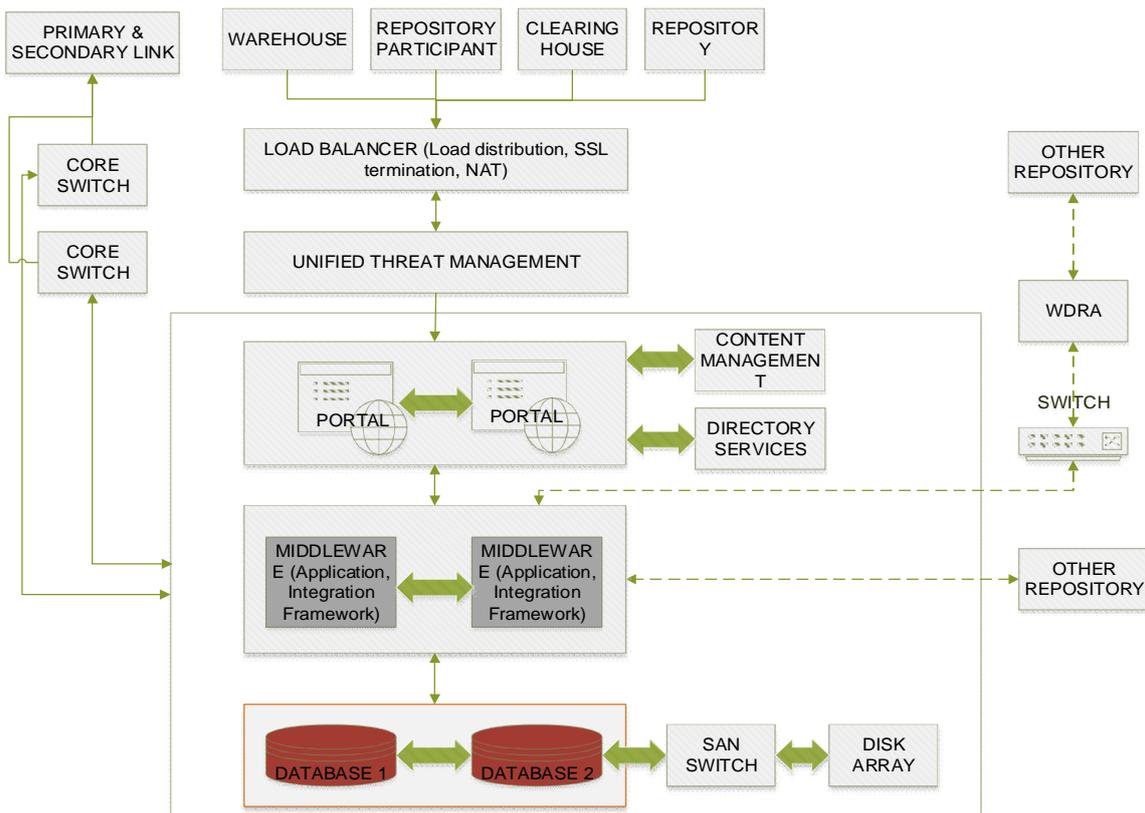

Figure 3: Indicative Solution Architecture

2.6.2.1. Solution Components

The major software, hardware & communication solution components are detailed below

a) **Portal**

The portal will be used to display public content (such as information about the repository) and also provide access to the application functions. The portal should provide a URL which can be used to view the public content on the portal. The user interfaces (UIs) for the application can be accessed on logging into the portal.

b) **Directory Service**

The directory service will be a standard directory like LDAP (lightweight directory access protocol) and contain information for different users and used for user authentication and access control

c) **Content Management**

The portal should be integrated with a Content Management framework that can serve as a content repository and provide dynamic configuration of layout and content on the portal and provide utilities such as search from the portal.

d) **Middleware**

The middleware will serve as the runtime for the application and APIs. It should provide scalability by dynamic instantiation of runtimes based on user load.

e) **Application**

The repository application will include online modules for repository module, Warehouse, Repository Participants, other repository interface and clearing. It will provide user interfaces to query & transact on eNWRs and beneficiary account information.

f) **Database**

The database will store the electronic records of warehouse receipts. The database should support the ACID (Atomicity, Consistency, Isolation, and Durability) properties and provide access using open standards (JDBC, ODBC).

g) **Message Switch**

The message switch will be used to route transactions between repositories using a hub & spoke model. The message switch will be deployed at WDRA or one of the repositories. The message switch will include a queuing mechanism and an Enterprise Service Bus (ESB).

h) Servers

Servers host the application, middleware, database, portal, content management, message switch and other software. Servers provide the compute and memory capacity to run the different applications.

i) Load Balancer

The load balancer will be a hardware appliance that performs load distribution, SSL termination and network address translation (NAT).

j) UTM

The Unified Threat Management (UTM) appliance will serve as a perimeter security device and provide unified application & transport firewall, network intrusion prevention, gateway anti-virus & anti-spam, VPN and Security Operations Center (SoC).

k) SAN switch

The Storage Area Network (SAN) switch is used to connect to the disk array using the high speed fibre channel protocol.

l) Disk Array

Storage using disks configured in RAID 10 configuration for transactional performance.

m) Primary/Secondary Link

Wide area network (WAN) communication link, from an Internet Service Provider, for the data centre. A primary & secondary link needs to be provided for failover.

n) Core Switch

Network switch used to inter-connect all the hardware in the local area network and to the wide area network using a router.

2.6.3. Technical Specifications for Solution Components

2.6.3.1. Servers

- Servers should have RISC/CISC processors;
- Expansion slots should be available to increase the CPU & memory to at least double the initial capacity;
- Servers should provide 10Gbps Ethernet ports;
- Servers should be able to run enterprise class Operating Systems;

- Servers should have hot swap redundant power supplies;
- It should be possible to use the servers in a hardware cluster.

2.6.3.2. Load Balancer

- Should distribute user requests by redirecting into different servers for all the applications in the system;
- Should support load balancing at layer 4 and layer 7 of the OSI protocol;
- Should have provision for redundant power supplies.

2.6.3.3. UTM

- Should provide application & transport firewall, gateway-level antivirus, spam filtering, data leakage prevention, integrated SSL VPN;
- Firewall should support high availability and dynamic load balancing for data passing through the firewall;
- Should support stateful failover for firewall & VPN sessions;
- Should have provision for redundant power supplies;
- Should support static routing, dynamic routing, policy-based routing.

2.6.3.4. SAN switch

- SAN switch should be scalable to include additional ports;
- Should enable autosensing;
- Should be rack-mountable;
- Should allow non-disruptive firmware upgrades.

2.6.3.5. Disk Array

- Dual redundant controllers, micro-controllers, CPUs, cache memory, SAN switch connectivity in active-active or active-passive mode;
- Should provide RAID10, RAID1 or equivalent configuration;
- Should support online, non-disruptive firmware upgrades for controllers, disk drives;
- To ensure efficient utilization of storage, hot data & cold data by auto-tiering automatically (e.g. hot data on SSD or Flash and cold data on HDD);
- Should support hardware or software based data replication with storage on DR.

2.6.3.6. Core Switch

- Should be rack mountable;
- Should provide redundant power supplies & fans;

· Should provide local switching at all ports with non-blocking functionality;

· Should support unicast & multicast routing protocols;

· Should support different types of access control lists (ACLs) – VLAN, standard & extended IP security router, port-based.

2.6.3.7. Middleware

· Should support enterprise class application runtimes such as J2EE, .NET, etc.

· Should provide integrated framework for application & data integration, message queuing, business rules, data access, etc.

· Should support runtime for Service Oriented Architecture (SOA) and micro-services;

· Should be possible to cluster multiple middleware instances in active-active mode.

2.6.3.8. Database

· Should support the ACID properties and provide access using open standards (JDBC, ODBC)

· Should provide transaction throughput as mentioned in Performance Requirements;

· Should provide data vaulting functionality;

· Should provide integrated encryption/decryption of data;

· Should allow defining of static, dynamic and policy-based data security rules;

· Should be possible to cluster multiple database instances in active-active mode

2.7. Business Continuity Planning (BCP) and Disaster Recovery (DR)

Repositories should develop a Business Continuity Plan & Disaster Recovery strategy (BCP/DR) to ensure failsafe business operations. Some of the key considerations for the BCP/DR strategy include:

· Definition of RTO, RPO & uptime; Repository should plan for high availability between 99% ("two nines") and 99.9% ("three nines") which allows downtime between 9 hours to 4 days per year

· Enable high availability at Data Centre (DC) for critical software & hardware, such as for database, portal & middleware; mechanisms such as clustering & failover can be considered for high availability of software

· Enable data replication to enforce data protection with zero data loss

- Enable data availability & archival requirements, such as archival of transactional & historical data, backup & restore service to enforce data protection with zero data loss
- Enable operational backup schedule for full backup, incremental backup & differential backup
- Ensure availability of hardware hot-spares, during outages, to maintain uptime
- When DR is setup, enable real-time data replication between DC & DR databases and failover to DR site on outage of DC

2.8. Business Continuity Planning

Requirements for BCP & DR for Repositories are as mentioned below:

- Uptime of 99.9% (means about 9 hours of unplanned downtime per year), in line with the uptime requirements for depositories in capital markets. However, during initial stages uptime of at least 99.5% will be accepted.
- Recovery Time Objective (RTO) of 45 minutes.
- Recovery Point Objective (RPO) of 1 minute.
- Repository can consider storing transaction logs in the cloud with appropriate security controls, as a form of "near DR".
- High-speed redundant communication links between the DC & DR, with minimum bandwidth of 16Mbps, using dedicated leased line or appropriate public network protocols such as carrier ethernet.
- DR site should be configured to provide for continued operations with 100% functionality as a redundancy for central site failure. This is in line with the DR capacity of for the depositories in the capital market.
- Support for multi-level backup with at least 3 levels, i.e. 1 full backup & 2 incremental backups: L0 (full backup), L1 (incremental backup), L2 (incremental backup).
- One weekly L0 backup and alternate daily L1 and L2 backups
- Enable data replication, using advanced mechanisms such as log shipping, to enforce data protection with zero data loss.
- Enable data availability & archival requirements using automated mechanisms such as D2D2T backup & restore service.
- Infrastructure at DC must ensure high availability at all times and switch to DR must only be as a matter of exception and not routine.

- Should be able to provide for scalability and availability through load balancing and fail-over mechanisms. Both hardware and software load balancing should be possible.
- Failover mechanisms, such as clustering, for key solution components such as the portal, middleware, database with active-active mode of operation using load balancers.
- Enterprise grade server operating systems (OS) should be 64-bit with support for essential services such as Directory Services, DNS, DHCP, RADIUS, global file system support and unlimited virtualization.
- All servers would be configured for high availability and no single point of failure.
- Availability of hot-plugging of hardware components to ensure continuous operations.

2.8.1. Data Centre

Repository is required to use its own or leased Data Centre for hosting all the central IT infrastructure. Data Centre is the focal point of Repository's ICT infrastructure especially for core system. Data Centre will host core application main servers and storage infrastructure. It acts as a central hub for connecting RPs, WSPs, warehouses, WDRA and other external institutions and community through Internet

Role & Responsibilities of the repository:

- The Core Repository Application infrastructure and Repository Portal are expected to be hosted at the Data Centre (DC).
- The repository will provide the necessary hardware for hosting Repository Portal and Repository Software applications.
- The successful applicant shall monitor continuously Repository web portal and application infrastructure at the DC to ensure availability as per agreed SLA's.
- During the Contract period, all project assets hosted in DC should be in safe custody and due reasonable care should be taken on the behalf of the Department to prevent any unauthorized use.

2.8.2. Disaster Recovery Center

Non availability of Disaster Recovery ('DR') Site can expose Repository to risks of large-scale disaster, such as a building fire, prolonged power grid failure, earthquake, or catastrophic flood. Hence there in a need for Repository to identify and implement a DR site which consists of a

replica of the primary system, placed at a remote site, and kept in readiness to take up the work of the primary system in the event of a disaster

Role & Responsibilities of repository:

- The repository is expected to provide complete DR site on lease or self-owned basis for the Repository.
- The repository will be responsible for primary & secondary connectivity of state data centre with DR site.
- The repository will provide the required necessary bandwidth between DC and DR to ensure that following business requirements are met in case of disaster or unplanned disruption of services:
    - Near zero data loss at all time.
    - Repository can propose near line data centre to achieve near zero data loss at all the time.
    - It is desired that the DC and DR site are setup in parallel. The DR site should be commissioned along with the DC site.

It is emphasized that the complete responsibility of the replication and data loss prevention issues would be with the repository.

2.9. Limited Purpose e-Auction for default of Bank Pledged Goods

Repositories are required to conduct a limited purpose e-auction in case of default by the depositors in repaying the loans taken against eNWR. Under this mechanism, e-auction will be carried out by the repository through an auction platform which will be managed by them. The stakeholders for the entire e-auction process are as listed below:

- **Repository** – The repository will be responsible for managing eNWR information and the e-auction platform in the proposed system.
- **Pledgor** – The pledgor is the farmer/depositor who has defaulted on the loan taken from the bank
- **Pledgee/ Bank** – The pledgee is the bank which has provided collateral financing to the farmer/trader against the collateral of goods
- **Clearing Bank** – The Clearing Bank will be responsible for collecting the auction payments and transferring the auction proceeds to the Pledgee Bank

· **Bidder** – Bidder are the interested parties who will place bids for the auctioned goods.
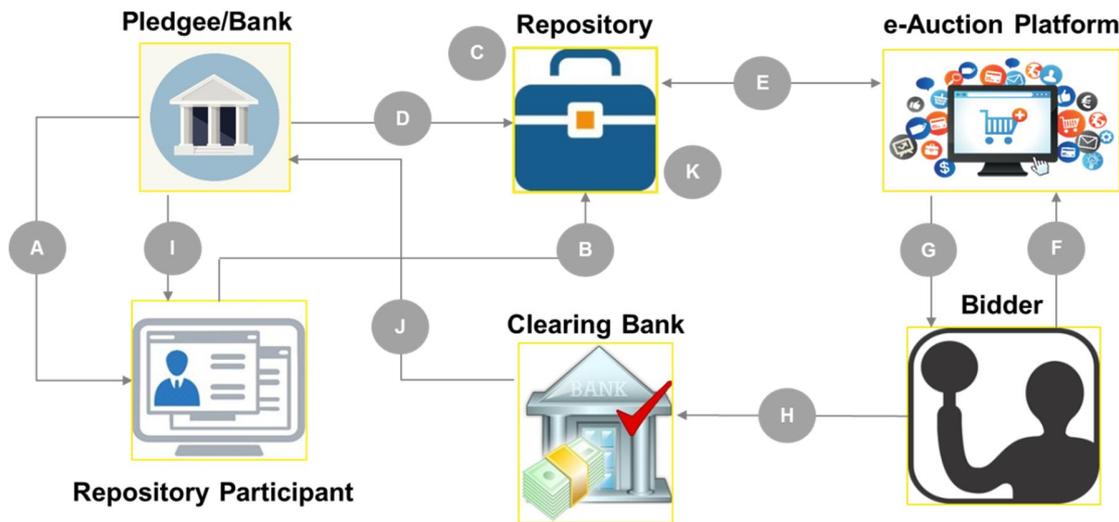
Figure 4: Indicative e-Auction mechanism

A – Pledgee invokes the pledge after the pledgor defaulted and the pledgee following the procedure for invocation

B – RP requests repository for transfer in the name of pledgee

C – Repository makes a transfer in the name of pledgee

D – Pledgee requests repository for e-auction of pledged eNWR. At this time, the repository will block further transfer of balances from the pledgee account.

E – Repository collects KYD of bidders and conducts e-auction

F – Bidders participate in e-auction

G – e-Auction platform notifies the winning bidder and requests payment

H –Bidder submits payment to clearing bank

I – Pledgee requests the repository to remove the block and transfer the ownership in the name of Bidder

J – Clearing Bank makes payment to Pledgee after determining the hierarchy of payments of auction proceeds to the entities as per the provisions of the Act, Rules, Regulations and Guidelines.

K - Repository makes a transfer in the name of winning bidder and informs bidder

2.10. Change Management and Capacity Building

The success of Repository, both in short term as well as long term would depend on the level of penetration it is able to achieve. Drawing upon the diverse challenges expected for the implementation of repository services, specifically the market challenges, it is apparent that capacity building is the need of the hour to further ensure licensing of repository as a successful program and to increase acceptance by the internal as well as external stakeholders.

The implementation of multiple solutions and new process will significantly impact the functioning of various market participants across the country. The challenge will be to empower and support the various market participants to understand, learn, and adopt the new way of working in order to fully realize the potential benefits of this fundamental change.

In order to overcome these challenges, a comprehensive Change Management plan is necessary for the successful implementation of the repository services in the market. For achieving this, the following indicative activities shall be under taken by the repository.

- Repository shall define change management strategy comprising but not limited to scope and coverage of change management; detailed implications of change management; detailed road map for execution changes pertaining to processes, systems and stakeholders; and monitoring and control plan with integrated risk management strategies.

- Repository shall set up a change management team, this would consists of creating a powerful team to drive change management successfully across the market participants. The team shall include 'change champions' who will be the catalyst for implementing the repository services.

- Repository shall have a communication strategy, which shall enable communication to stakeholder of proposed changes and benefits.

- Repository shall notify WDRA, a periodic bases, the change management activities carried out.

3. MINIMUM SERVICE LEVEL AND PERFORMANCE REQUIREMENTS

3.1. Performance requirements

3.1.1. The Repository System should meet the following minimum application performance requirements:

- Concurrent user load of at least 3,000 users per repository with an assumption of two repository.

- Minimum throughput of 5,000 transactions per hour with an assumption of two repository.

- System must ensure specified performance parameters with communication channel throughput not exceeding 2Mbps per online user.

- System must be sized so that utilization at average load is no more than 40% of the capacity and utilization at peak load is no more than 60% of the capacity during the online window. During the offline window, the peak load should not be more than 80% of the capacity.

- System average & peak load should be monitored on a continuous basis and the ratio between peak load & average load capacity utilization updated and capacity should be augmented if required.

- Response times for standard tasks, without considering the network (WAN) delays, must not exceed the indicative thresholds defined

- System throughput must be able to cater for peak load without any performance degradation as per the specified criteria.

- System must provide batch processing for specified processes without any performance degradation.

- System including software, hardware and network should be checked for performance every 6 months

3.2. Scalability

The Repository System should meet the following scalability requirements:

- System must be scalable to handle an additional 50% increase in the no. of concurrent users and no. of transactions per hour with the existing configuration.

- System must provide an option for adding additional functional modules without any degradation in performance.

- System must provide an option for adding new service delivery channel.

- Repository system can be hosted on private cloud with appropriate security controls.

3.3. Reliability

The Repository System should meet the following reliability requirements:

- System must provide 99.9% uptime for users (i.e. overall application availability of 99.9% encompassing network and compute hardware, as well as system, middleware and application software; this allows unplanned downtime of up to 9 hours per year. However, during initial stages uptime of at least 99.5% will be accepted. However, system should not have outage of more than 60 mins at a stretch in online window.

- System must provide high availability, with active-passive configuration between DC & DR sites, with no single point of failure for the complete system.

- System must provide for isolating a particular node/cluster in case of any faults in order to continue operations.

- DC & DR sites must support hot plugging of hardware components such as hard disk, power supply, network cards, etc. to facilitate continuous operations.

- System must ensure data security & integrity due to communication channel failures, software & hardware operability failures.

- System must ensure error recovery and elimination of possible after failure consequences of communication channels, software & hardware.

3.4. Security

The Repository System should meet the following security requirements:

- The system should have strong role based access control logic built in it. Access control mechanism should be at multi levels

- System must enforce maker checker based operations for critical transaction and prevents any user to assume both maker and checker rights for such activity. Where warranted system may also have third level check for high value transaction or operation in dormant acct etc.

- System must maintain detailed audit trail logs

- Compliance to ISO 27001 standards must be ensured

- The DC and DR site should be hosted in a strongly secure physical environment

- There should be DC. DR and Network security audit through external IS auditors at least once every half-year

3.5. Service Level Agreement

Proposed service level parameters for repository are as mentioned in detail in the table below:

Sr. No:	Service Level Parameter Definition	Service Level Parameter			Requirement	
		Target			**Requirement**	
1.	Availability of **Repository System**	(a) 24X7 throughout the year with an approved down time of 5 hours per week only on a non-business day after 8 pm and before 8am. This approval should be obtained at least 5 working days in advance. Approval to be provided by WDRA. However duration of the maximum allowable planned downtime time will be reviewed on yearly basis · Repository System will ensure availability of 99.50%. Repository system will not be down for more than 60 minutes at a stretch on any instance Note: i. Availability will be measured on quarterly basis from the System Uptime reports provided by the repository ii. Planned downtime will not be classified as unavailability. This includes downtime for major upgrades, changes, replacements, etc. iii. While availability measurements shall be in force on quarterly basis from the commencement of operations the provisions related to fines with respect to availability shall come into force only after 3 months of operations. iv. Further where there is a significant change / upgrade /replacement in application software or platform systems post commencement of operations, the provisions related to fine for such new functionality / affected platform shall be suspended for a quarter	>= 99.50% Continuous downtime for more than 60 minutes >= 99.49% to < 98.50% >= 98.49% to < 97.50% =< 97.49%			Failure to comply to the performance requirements may attract fine as may be decided by WDRA	
2.	Performance of the Repository System	Sr. No. / Measurement / End-to-End response times[7] (see sub-table below)			100% compliance to the response time for all parameters	

Sr. No.	Measurement	End-to-End response times[7]		
	Portal Interaction	85%	90%	95%
1	Login & Authentication	<= 1 Second	<= 1.5 second	<= 2 second

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[7] End-to-end response time is the amount of time for a response to be generated by the repository system after receiving the request at the data center entry point

Sr. No:	Service Level Parameter	Service Level Parameter					Requirement
	Definition	Target				Requirement	
		2	Rendering of other portal pages	<=1 Second	<= 1.5 second	<= 2 second	>5% variation on the upper side in the response time for any parameters	Failure to comply to the performance requirements may attract fine as may be decided by WDRA
		3	Queries	<=2 Second	<= 2.5 second	<= 3 second		
		4	View documents	<= 10 Second	<= 12 second	<= 15 second		
		Requirement for Transactions		85%	90%	95%	>10% variation on the upper side in the response time for any parameters	
		5	Issuance of eNWR	<=2 Second	<= 2.5 second	<= 3 second		
		6	Changes to eNWR	<=2 Second	<= 2.5 second	<= 3 second		
		7	Transfer of eNWR	<=2 Second	<= 2.5 second	<= 3 second	>20% variation on the upper side in the response time for any parameters	
		8	Pledging/de-pledging of eNWR	<=2 Second	<= 2.5 second	<= 3 second		
		9	Opening warehouse account	<=5 Second	<= 5.5 second	<= 6 second		
		Requirements for Batch Processes					>30% variation on the upper side in the response time for any parameters	
		10	Generation of daily report for WDRA	<= 30 Minutes				
		11	Generation of eNWR status for warehouses	<= 30 Minutes				
		12	Generation of report for repository reconciliation	<= 30 Minutes				
		13	Inter-Repository reconciliation	<= 1 Hour				

While response time measurements shall be done at the time of commencement of operations the provisions related to fine shall come into force only after 3 months of operations. Further where there is a significant change/upgrade/replacement in platform or change affecting the critical query/postings in 3 above, post commencement of operations, the provisions related to

Sr. No:	Service Level Parameter	Service Level Parameter	
	Definition	**Target**	**Requirement**
		fine for such affected systems shall be suspended for a quarter	
3.	Bi-annual Disaster Recovery Drills with conformance of RTO & RPO	Applicant shall shift to DR site for operation with near zero data loss and with the specified RTO of 45 mins for continuous period of 24 hours without impacting any business transaction. Bi-annual test of the DR plan to be completed within 180 days from the previous bi-annual test and report submitted to WDRA within 30 calendar days	
4.	Adherence to Data Backup, Data Retention & Archival Policy	The Applicant shall adhere to the Data Retention & Archival Policy developed in consultation with WDRA to be measured on yearly basis. The Data Retention & Archival policy shall be developed by the Repository and approved by WDRA. 100% adherence to Backup policy	Failure to comply to the performance requirements may attract fines as may be decided by WDRA
5.	Compliance with data and information security standards such as ISO 27001 at the data centre.	· Standards as per ISMS certification to be followed and annual review of same shared with WDRA · Compliance with standards: 100 % (Controls that are not applicable shall not be considered)	

4. EVALUATION OF APPLICATIONS

4.1. Technical Evaluation Committee

WDRA shall constitute a Technical Evaluation Committee (TEC) for the purpose of evaluation of applications submitted by applicants in accordance with clause 8 of the guidelines. Post evaluation of the eligibility of the applications (stage 1), TEC shall evaluate the Technical Application of the applicants for stage 2. Technical Applications of only those qualifying stage one would be evaluated for stage 2.

4.2. Eligibility Criteria

4.2.1. The following minimum eligibility criteria are expected to be met by the applicants.

Sr. No.	Description	Required d
1	The applicant shall be an entity providing one or more services related to financial markets to public at large which is regulated by any one of the regulatory agencies as may be specified by WDRA from time to time, which at present shall include RBI, SEBI, PFRDA and IRDA.	Copy of the Registration SEBI/PFRD entity/Group
2	The applicant should not have been denied renewal of an existing registration or the applicant's Certificate of Registration has not been cancelled or terminated by any of the regulatory agencies specified by WDRA from time to time, which at present shall include RBI, SEBI, PFRDA and IRDA.	Certificate s Representat firm stating t format in Fo
3	The sole or the lead sponsor shall have a net-worth of not less than rupees fifty crore as on the date specified by the Authority.	Audited Bala and Loss Ad 14; FY 2014 an Auditor's Networth as 30.09.2016,
4	The entity which proposes to act as a Repository shall have a net-worth of not less than rupees fifty crore as on the date specified by the Authority.	Audited Bala and Loss Ad FY 2014-15 Auditor's cer Networth as 30.09.2016,

Sr. No.	Description	Required documents / Proofs
5	If the entity that proposes to act as a Repository has other businesses, it will be required to create a strategic business unit within the company that will perform the functions of the Repository.	Certificate signed by Authorised Representative of the applicant firm stating the same.
6	The lead sponsor, if any, shall hold or propose to hold at least twenty six percent of the authorised share capital of the proposed Repository.	CA certified shareholding pattern as on 31.03.2016 OR an Undertaking of the conformance to shareholding pattern
7	The applicant, sole sponsor or the lead sponsor, as the case may be, should have an average annual turnover of Rupees fifty crores in the last three financial years and have not incurred cash loss during the last two financial years.	CA Certificate confirming the information.
8	The applicant or any of the sponsors, as the case may be, must have similar experience in developing and managing a large information and communication technology based central systems with the requirements as may be specified by the Authority in the call for applications. · Managed a minimum of 50,00,000 database records (1); · Processed a minimum of 1,00,00,000 online transactions, during each of the 3 years (1); · Maintained an uptime of 99.5%, measured on a Quarterly basis during the last three years (2); · Demonstrable Business Continuity Plan (BCP)/Disaster Recovery Strategy (DR) in operation (4 & 5); · Experience in establishing and managing high level of information security and privacy (2); · ISO 27001 and ISO 23001 certified (3)	1. Auditor Certificate stating the number of records handled by the Applicant as specified in Form J 2. Copy of IT Audit Report of last three years 3. Copy of ISO 27001 and ISO 23001 certifications 4. Copy of BCP and DR Report 5. Last year DR drill report 6. Certificate for proof of experience in the format set out in Form J of Annexure II

Sr. No.	Description	Required documents / Proofs
9	If one of the sponsors is an exchange, such exchange shall not hold or propose to hold more than fifty one percent of the paid up equity share capital of the company that will set up the Repository and shall reduce the same to twenty four percent within a period of ten years from the date of grant of Certificate of Registration.	CA certified shareholding pattern as on 31.03.2016 OR Undertaking of the conformance to shareholding pattern
10	The applicant or the sponsor(s), as the case may be, and each key managerial person of the applicant or sponsor(s) shall satisfy the following conditions insofar as they are applicable to them —	Declaration signed by MD or Authorised Representative of the applicant firm stating the same
a	they should not have been convicted by a court of law for any offence and sentenced in respect of that offence at any time in the preceding five years;	
b	the key managerial person(s) should not be a person of unsound mind or an undischarged insolvent;	
c	they should not be under a declaration of ineligibility/banned/ blacklisted by any Regulatory Authority, State or Central Government/ any other Government institutions in India for any reason whatsoever as on the date of submission of the application.	
d	they should not be under investigation by any law enforcement agency for unfair practices or any other offence.	
e	The applicant shall submit a declaration stating that it will comply with the provisions of the Act, Rules, Regulations and Guidelines made thereunder from time to time.	

4.3. Contents of Application Submissions

4.3.1. The contents of the submission shall include documents as mentioned in Section 6.1 & 6.2.

4.3.2. For Experience related document, the applicant shall furnish:

    a. Certificate for proof of experience in the format set out in Form J of Annexure II;

4.3.3. For Financial Capability related document, the applicant shall furnish:

    a. Financial Capability Statement in the format set out in Form K, L, and M of Annexure II;

    b. Certificate from Auditor for proof of experience in the format set out in Form J of Annexure II.

    c. Audited annual reports for the latest three completed financial years.

4.4. Shortlisted Applicant

4.4.1. On meeting all the parameters set out in the eligibility criteria, the application of the applicant shall be considered to qualify for further examination of its Technical Application and Technical Presentation.

4.5. Technical Application Evaluation

4.5.1. Checklist for submissions as part of Technical Application

4.5.1.1. The Technical Application submitted by the applicants will be used to ascertain the understanding of the project scope by the entity, strengths of the entity in terms of its existing experience in running a similar business and the proposed plan for the manpower, approach and methodology etc. in implementing the repository project.

4.5.1.2. The evaluation of the Technical Application would be based on the submissions by the entities. Hence, it is in the interest of the entity to diligently prepare the Technical Application and provide complete details as part of its Technical Application.

    I. Track Record and Experience

    i. Organizational details

    ii. Financials

    iii. Experience in offering Registry/ Custodian/Depository services/ Safekeeping of assets, Record keeping or any other service

    iv. Size of investor/client base.

    II. Proposed IT systems and solutions

    i.   Proposed solution definition for IT Infrastructure

    ii.   Proposed solution definition for DR

    iii.   Compliance to Functional Specifications

    iv.   Plan for meeting performance& availability requirements

    v.   Compliance to technical specifications

    vi.   Proposed plan for backup & recovery, data retention & archival

    vii. Proposed IT security

   viii. Proposed service level Agreement including customer & technical support

    ix.   Proposed documentation & reporting

    x.   Proposed implementation &rollout plan

   III.   Risk Management

    i.   Demonstrable BCP DR strategies

    ii.   Proposed use of industry standard tools

   IV.   Marketing Activities

    i.   Experience in carrying out marketing activities

    ii.   Experience in carrying out capacity building capabilities

4.6. Evaluation Process

4.6.1. Evaluation and award of Scores

· The Application of the Applicants would be evaluated as per the parameters set out in the table below. Entities scoring minimum 70 out of total 100 marks will be qualified on the technical parameters. A summary of different evaluation parameters and marks is as shown below:

Sr. No.	Evaluation Parameters	Maximum Marks
1	**Track Record and Experience**	**10**
2	**Registry/ Custodian/Depository services, Safekeeping of assets, Record keeping Services**	**10**
3	**IT Systems and Solutions**	**50**
4	**Risk Management**	**15**
5	**Marketing Activities**	**5**
6	**Operational Procedures (Internal Controls, Process Documents, Legal Framework, Grievance Redressal Mechanism, Monitoring and Control Mechanism on RP/WSP, etc.)**	**10**
Total		**100**

· The parameters and the respective weightage for each of the parameter are set out in the table below.

· For evaluation purpose of following parameters, experience of either "Applicant" or "sponsoring entity having majority stake" will be considered:

- · Track Record and Experience

- · Experience in Registry/ Custodian/Depository services, Safekeeping of assets, Record keeping Services

- · Risk Management

Sr. No	Evaluation Parameter	Maximum Marks	Basis for evaluation
1	**Track Record and Experience**	**10**	
1.1	**Organization Details** Details about organization including the Year of Establishment, nature of operations, details about Promoter Group, Shareholding Pattern as on 30.06.2016, Brief profile of key team members with expertise in managing repository related operations · Scoring will be based on the number of years of operation in India: § >10 Years – 5 Marks § 5-10 Years – 3 Marks § Less than 5 Years – 2 Marks	**5**	Documentation to be provided along with application
1.2	**Financials** · Scoring will be based on the turnover: § >100 Crore – 5 Marks § 50 – 100 Crore - 2 Marks	**5**	Documentation to be provided along with application
2	**Experience in Custodian/Depository Services**	**10**	
2.1	**Experience in offering Registry/ Custodian/Depository services, Safekeeping of assets, Record keeping** Experience in managing Registry/Repository/ Custodian/ Depository services in Financial/Commodity/Insurance markets in India. Scoring will be based on years of experience in offering Registry/ Custodian/Depository services, Safekeeping of assets, Record keeping services: § >10 Years – 5 Marks § 5-10 Years - 3 Marks	**5**	Documentation to be provided along with application

Sr. No	Evaluation Parameter	Maximum Marks	Basis for evaluation
	§ Less than 5 Years – 2 Marks		
2.2	**Size of Investor Base** Size of investor/customer base of the entity which is operating/managing similar businesses. Scoring will be based on the number of investor/customer accounts as on 30.06.2016: § Greater than 1 Crore – 5 Marks § 75 Lakh – 1 Crore – 4Marks § 50 – 75 Lakh – 3 Marks	**5**	Documentation to be provided along with application
3	**Proposed IT Systems and Solutions**	**50**	
3.1	**Proposed Solution Definition for IT Infrastructure like Data Centre, DR Site, the proposed Solution Architecture and Solution Components with technical specifications**. Scoring will be based on the approach proposed to address issues of reliability, availability, scalability and interoperability in the Solution Definition **Proposed Solution Definition for DR** Includes the proposed Solution Architecture and Solution Components with technical specifications. Scoring will be based on the approach proposed to address issues of reliability, availability, scalability and interoperability in the Solution Definition	**10**	Technical solution proposed and Technical Presentation
3.2	**Plan for Backup & Recovery, Data Retention & Archival** Scoring will be based on the approach proposed for the following: § Backup & Recovery plan; § Data Retention & Archival plan; § Implementation of Backup & Recovery, Data Retention & Archival Plan	**10**	Technical solution proposed and Technical Presentation

Sr. No	Evaluation Parameter	Maximum Marks	Basis for evaluation
	Plan for IT Security Scoring will be based on the approach proposed for the following: § Identity & Access Management; § Application Security for the online modules and how the security issues identified in the latest OWASP list (https://www.owasp.org/index.php/Category:OWASP_Top_Ten_Project) will be handled; § Handling of sensitive data; § Network Security; § Monitoring & Reporting Security breaches, escalation methods; § Plans for Security Audit;		
3.3	**Compliance to Functional Specifications** Scoring will be based on the proposed level of compliance, innovativeness of the solution, demonstrable re-use of previous experience and value additions suggested: **Compliance to Technical Specifications** Scoring will be based on the proposed level of compliance, innovativeness of the solution, demonstrable re-use of previous experience and value additions suggested	**10**	Technical solution proposed and Technical Presentation
3.4	**Plan for Service Level Agreement including Customer & Technical Support** Scoring will be based on the approach proposed for the following: § Service level agreement Framework; § Logging, Diagnosis, Resolution of issues in the proposed framework; **Proposed Documentation and Disclosure**	**10**	Technical solution proposed and Technical Presentation

Sr. No	Evaluation Parameter	Maximum Marks	Basis for evaluation
	Scoring will be based on the approach proposed for the following: § User Documentation § Technical Documentation § Disclosures		
3.5	**Plan for meeting Performance & Availability Requirements** Scoring will be based on the approach proposed for achieving, measuring & monitoring performance & availability requirements **Proposed Implementation & Rollout Plan** Scoring will be based on a realistic approach proposed for scheduling the following: § Module-wise activities such as development, unit test, acceptance test § Activities such as system test, load test § Rollout (phase-wise or big-bang)	10	Technical solution proposed and Technical Presentation
4	**Risk Management**	**15**	
4.1	**Demonstrable BCP DR Strategy** Scoring will be based on evaluation of BCP and DR Strategy.	10	Documentation to be provided along with application
4.2	**Proposed use of Industry Standard tools**	5	Technical solution proposed and Technical Presentation
5	**Marketing Activities**	**5**	

Sr. No	Evaluation Parameter	Maximum Marks	Basis for evaluation
5.1	**Carrying out marketing activities related to awareness, market development, involvement of target audience, etc.** Scoring will be based on the proposed initiatives in carrying out marketing and market development activities	**2.5**	Technical solution proposed and Technical Presentation
5.2	**Carrying out Capacity Building activities for the market participants including training & on-boarding Repository Participants:** Scoring will be based on the proposed initiatives in carrying out capacity building activities	**2.5**	Technical solution proposed and Technical Presentation
6	**Operational Procedures**	**10**	
6.1	**Proposed Mechanism for Internal Controls, Process Documents, Legal Framework, Grievance Redressal Mechanism, Monitoring and Control Mechanism on RP/WSP, etc.** Scoring will be based on the proposed initiatives in carrying out the above mentioned activities	**10**	Technical solution proposed and Technical Presentation

4.6.2. Business & Technical Presentation Evaluation

1. All the shortlisted applicants will have to do a Business & Technical Presentation as a part of evaluation, to prove the application functionality and performance in delivering requirements in terms of functionality covered under this Call for Application.

2. In addition to Technical Presentation, the Technical Evaluation Committee may request for a site visit to inspect the existing operations of applicant / sponsoring agency. The applicant will extend full support and co-operation to undertake this activity.

4.6.3. Evaluation of Applications by Technical Evaluation Committee

1. The Technical Evaluation Committee will evaluate the application in accordance with the criteria as mentioned in Section 5.6.
2. The consolidated score of each shortlisted applicant will be submitted to WDRA.
3. The decision of the WDRA will be final and binding on all applicants
4. Applicants will be selected and will be permitted to set up a Repository if they qualify all criteria as mentioned in Section 5.2, 5.3 & 5.6.2.
5. The selected applicants will be informed through a Letter of Intent pursuant to Section 2.21.3.

4.7. Exit Management

The applicant firm needs to include in the response the exit management plan for the repository operations in case it surrenders its license or any other reason of exit. The exit management plan shall be submitted as specified in Clause 31 of Guidelines on Repositories and Creation and Management of Electronic Negotiable Warehouse Receipts, 2016

5. CHECKLIST – APPLICATION SUBMISSION

5.1. Eligibility Submissions

5.1.1. General Submissions

- Letter of Application as per Form A of Annexure II

- Power of Attorney as per Form B of Annexure II, authorising the signatory of the Application to commit the Applicant

- Details of the Applicant as per Form C of Annexure II

- Anti-Collusion Certificate as per Form D of Annexure II

- Letter of Undertaking from the Applicant as per Form E of Annexure II

- Undertaking of SBU as per Form F of Annexure II

- Undertaking for Key managerial Person(s) as per Form G of Annexure II

- Declaration for compliance with the provisions of the Act, Rules, Regulations and Guidelines as per Form H of Annexure II

- Copy of the certificate of Registration with RBI/ SEBI/PFRDA/IRDA of the single entity/Group entities

- Copy of ISO 27001 and ISO 23001 certifications

- Copy of BCP and DR Report

- Last year DR drill report

5.1.2. Experience Submissions

- Certificate from the Applicant's Auditor as per Form J of Annexure II

- Copy of IT Audit Report of last three years

5.1.3. Financial Submissions

- Audited BS and P&L of FY 2013-14

- Audited BS and P&L of FY 2014-15

- Audited BS and P&L of FY 2015-16

- Auditor Certificate of Turnover

- Auditor Certificate of Networth

- CA Certified Shareholding Pattern as on 30.09.2016 OR an Undertaking of the conformance to shareholding pattern

5.2. Technical Application Submissions

5.2.1. Letter for enclosing the Technical Application as per Form M of Annexure II

5.2.2. Details of the applicant as per Form C of Annexure II

5.2.3. Certificate of Incorporation of the organisation

5.2.4. Certification of Investor Base from Statutory Auditor as per Form J of Annexure II

5.2.5. Proposed Solution Definition for IT Infrastructure like Data Centre, DR Site, the proposed Solution Architecture and Solution Components with technical specifications and Proposed Solution Definition for DR

· Approach and Methodology Document(TECH 1.1)

5.2.6. Plan for Backup & Recovery, Data Retention & Archival and Plan for IT Security

· Approach and Methodology Document(TECH 1.2)

5.2.7. Compliance to Functional Specifications and Compliance to Technical Specifications

· Approach and Methodology Document(TECH 1.3)

5.2.8. Plan for Service level agreement including Customer & Technical Support and Proposed Documentation and Disclosure

· Approach and Methodology Document(TECH 1.4)

5.2.9. Plan for meeting Performance & Availability Requirements and - Proposed Implementation & Rollout Plan

· Approach and Methodology Document(TECH 1.5)

5.2.10. Demonstrable BCP DR Strategy

· Approach and Methodology highlighting the BCP DR Strategy (TECH 2.1)

5.2.11. Proposed use of Industry Standard tools

· Approach and Methodology highlighting the use of industry standard tools (TECH 2.2)

5.2.12. Carrying out marketing activities related to awareness, market development, involvement of target audience, etc.

· Approach and Methodology highlighting marketing activities (TECH 3.1)

5.2.13. Carrying out Capacity Building activities for the market participants including training & on-boarding Repository Participants.

· Approach and Methodology highlighting training activities (TECH 3.2)

5.2.14. Proposed Mechanism for Internal Controls, Process Documents, Legal Framework, Grievance Redressal Mechanism, Monitoring and Control Mechanism on RP/WSP, etc.

- Approach and Methodology highlighting operational procedures (TECH 4)

6. ANNEXURES TO SCOPE OF SERVICES

For Annexure to Scope of services, Please refer to the document "Annexure I – Annexure to Scope of Services"

7. APPENDICES FOR ELIGIBILITY

For Appendices for Eligibility, Please refer to the document "Annexure II – Appendices for Eligibility"